

WIRELESS SPEECH AND DATA TRANSMISSION**ABSTRACT**

This disclosure is directed to techniques for voice and data transmission from a wireless communication device, such as mobile telephone handset. In accordance with the disclosure, a wireless communication provides a hybrid coupler that permits voice and data calls to be combined for transmission over a common air interface. When increased transmit power is required, the wireless communication device prioritizes the voice call over the data call. In this case, the voice call is sent over both the voice output branch and the data output branch, taking advantage of the power amplifier in each output branch chain to achieve a greater overall transmit power for the voice transmission. In this manner, the mobile subscriber unit independently and simultaneously handles data and voice calls under ordinary circumstances, but drops the data call and combines the voice and data output branches for voice transmission when increased transmit power is required for the voice transmission.